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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,564	10/24/2003	Jim B. Surjaatmadja	HES 2002-IP-008025U1	9140

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FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
STEPHENSON, DANIEL P	
ART UNIT	PAPER NUMBER
3672	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/692,564	SURJAATMADJA ET AL.	
	Examiner	Art Unit	
	Daniel P. Stephenson	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) *5-20 and 24-39* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,21-23 and 40-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102 & 35 USC § 103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 21-23 and 40-42 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the pre-grant publication '924 to Brown et al. (hereafter Brown et al. '924). Brown et al. '924 (Figure 8, paragraph 5) discloses a downhole fluid separator. It has a housing adapted for connection to a tool string; a cylinder (77) rotatably disposed in the housing and defining a flow passage therein; and a motor disposed in the housing for rotating the cylinder. The fluid flowing through the housing enters the flow passage and is subjected to centrifugal force such that the fluid is separated into different components having different specific gravities. There is a flow conditioner, or impeller, (79) for facilitating the separation of the fluid. The impeller is adjacent to an inlet of the cylinder for pumping fluid into the flow passage. In addition, the impeller is attached to the cylinder. As the cylinder is rotated it will impart centrifugal force to whatever fluid is flowing through it. Brown et al. '924 does not explicitly disclose that the separator separates oil and water. However, it is

noted in paragraph 5 of Brown et al. '924 that the separator can be used to separate streams where both streams contain liquid. And in paragraph 10 it is disclosed that a fluid of one density is separated from a fluid of another density. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the separator of Brown et al. '924 to separate oil and water as opposed to gas and oil. This would be done because it is common knowledge within the art that separators can be used for both instances.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolpack et al. in view of Cobb. Kolpack et al. (Fig. 1 and 2) discloses a downhole fluid separator. It has a housing (50) adapted for connection to a tool string; a cylinder (58) rotatably disposed in the housing and defining a flow passage (85) therein; and a motor (32) disposed in the housing for rotating the cylinder. The fluid flowing through the housing enters the flow passage and is subjected to centrifugal force such that the fluid is separated into different components having different specific gravities. There is a flow conditioner, or impeller, (56a) for facilitating the separation of the fluid. The impeller is adjacent to an inlet of the cylinder for pumping fluid into the flow passage. In addition, the impeller is attached to the cylinder. As the cylinder is rotated it will impart centrifugal force to whatever fluid is flowing through it. Kolpack et al. does not disclose that the separator separates oil and water. Cobb (col. 1 lines 43-52) discloses that a separator that separates gas and liquid is capable of separating any two fluids with different specific gravities. It would have been obvious to one of ordinary skill in the art at the time the invention was made to separate oil and water as taught by Cobb with the apparatus of Kolpack et al. This would be done because it is useful to produce oil while retaining water within the well.

Response to Arguments

5. It is the assertion of the applicant that this statement of Cobb:

> It should be noted, however, that separators are useful not only to separate well liquids and gas, but may also be used in separating any two fluid substances which have different specific gravities.

is not a blanket statement that would allow the use of two fluids instead of a gas and a fluid. As proof of this, it is stated that Cobb makes no further allusions to separating two liquids, and only refers to gas-liquid separation. The examiner respectfully traverses this assertion. The examiner takes the broad view of the references statements, and reads that it states that **any** two fluids may be separated that have different specific gravities. It is the opinion of the examiner that if the references do not need to further qualify the statement made by examples of liquid-liquid systems. If taken literally, the statement above covers both a gas-liquid separator and liquid-liquid separator. The fact that there isn't an example of a liquid-liquid system is irrelevant. As stated before, if a liquid-liquid system were to be excluded, the above statement would have read "any other liquid and gas substances."

6. It is the assertion of the applicant that since the titles of each of the references makes reference to "gas" separation that this is what they are limited to. The examiner respectfully traverses this assertion. Because a document refers to a certain aspect within the title does not preclude it from having other embodiments disclosed which differ from the entitled embodiment.

7. It is the assertion of the applicant that the Brown document does not refer to two different liquids in the statement:

> The term "gas separators" is actually a misnomer, in that these are used to divide the fluid into two streams, and both streams may contain liquid. One stream comprises higher quality fluid containing less gas and exits out of the

> liquid exit port. The second stream, which has a higher gas content, exits out of the separator through gas exit ports. (paragraph 5)

Again, the examiner reads the statement literally, in that instead of being a gas separator, the separator is used on liquid, where the end result is a liquid of one density and a liquid of another density being separated. As evidence of the common knowledge of using gas/liquid separators to separate oil and water, US 5,570,744 to Weingarten et al. is noted. It states (col. 7 lines 17-35):

> Although the separators 16, 16a, 16b and 16c are particularly adapted for and useful in separating gas from liquid in hydrocarbon well production operations, these separators and the systems disclosed herein may also be used in other fluid process applications for separating single phase fluids of different densities from each other and separating particulate solids from a fluid flowstream by removing the solids from the flowstream with a portion of a carrier fluid for the solids, which fluid may be more dense than other fluids in the flowstream. In other words, particulate solids may be separated from a flowstream of a fluid of uniform density by drawing off a portion of the fluid as a carrier for the particulate solids and allowing substantially solids-free fluid to flow through the discharge conduit 56 of the separator 16, for example. The separator system 89, for example, may also be used to separate oil from water whereby separate flowstreams of oil and water may be conducted from the system by way of the conduits 106 and 98, respectively, assuming water is the more dense fluid.

This statement is respective of a number of apparatus throughout the separation art that separate in both a gas/liquid system and a liquid/liquid system.

8. It is the assertion of the applicant that the Kolpack reference does not disclose "a cylinder rotatably disposed in the housing and defining a flow passage therein" and "wherein fluid flowing through the housing enters the flow passage and is subjected to centrifugal force such that the fluid is separated into different oil and water components having different specific gravities." The examiner respectfully traverses this assertion. It is not necessary for the fluid to be subjected to the centrifugal force within the flow passage, according to the claims. It merely

has to fulfill the two requirements presented; 1) that it flows through the housing and enters the fluid passage and 2)that it is subjected to a centrifugal force. Both of which are satisfied in the Kolpack reference.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel P. Stephenson whose telephone number is (571) 272-7035. The examiner can normally be reached on 8:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Bagnell
Supervisory Patent Examiner
Art Unit 3672

DPS